

REMARKS

In view of the above amendments and the following remarks, reconsideration and further examination are requested.

By this amendment, the independent claims, i.e., claims 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, and 88, have been amended. Thus, claims 44-91 remain pending.

Claims 44-91 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6,256,357 in view of Chung et al. This rejection is traversed and is inapplicable to new claims 44-91 as amended.

The Examiner indicated that claims 44-91 **would be allowable if rewritten or amended to overcome the double patenting rejection**. Accordingly, each of the independent claims has been amended to recite that the first data stream has an interval data for demodulating the modulated signals corresponding to the second data stream. This feature is not claimed in U.S. Patent No. 6,256,357, or disclosed or suggested by Chung.

In the inventions recited in claims 44-91 as amended, modulation/demodulation of the first and second data streams is performed according to m-level PSK/n-level PSK or m-level QAM/n-level QAM, respectively. Moreover, as stated above, claims 44-91 include recitations that the first data stream has an interval data for demodulating the modulated signals corresponding to the second data stream.

As set forth on page 49, lines 16-20, and Fig. 41 of the present application, the sync block has demodulation data including data I_T which includes information about interval arrangement.

Claims 1-5 of U.S. Patent No. 6,256,357 do not recite such a modulation/demodulation arrangement. With regard to Chung, the Examiner asserts that it would have been obvious to modify the system claimed in U.S. Patent 6,256,357 using Chung's teaching to obtain a communication wherein each of the two input data streams would be mapped to constellations having different sizes using the same digital modulation scheme. However, as discussed above, independent claims 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, and 88, have been amended to recite that the first data stream has an interval data for demodulating the modulated signals corresponding to the second data stream. Neither the claims of U.S. Patent 6,256,357 nor the Chung reference provide a disclosure or suggestion of such a feature. Therefore, claims 44-91

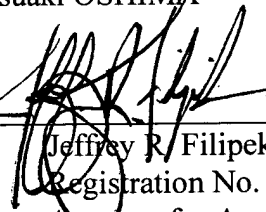
are not obvious in view of any combination of the system recited in claims 1-5 of U.S. Patent No. 6,256,357 with the system of Chung.

In view of the above amendments and remarks, it is submitted that claims 44-91 are allowable over the prior art of record and that the present application is in condition for allowance. The Examiner is invited to contact the undersigned attorney by telephone to resolve any remaining issues.

Respectfully submitted,

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